

WHAT IS CLAIMED IS:

Sub A1

1. A circuit comprising:
a first circuit portion connected to a first input,
the first circuit portion including at least one delay
element; and

5 a second circuit portion attached to the first
circuit portion, the second circuit portion including at
least one delayed signal input from the at least one
delay element, and an adjustment input, the adjustment
input not passing through the at least one delay
element, wherein when there is no adjustment input, the
10 circuit acts as a filter, and wherein the adjustment
input changes the level of the output without the
adjustment being filtered.

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2. The circuit of claim 1, wherein the first
circuit portion is a delay line.

3. The circuit of claim 1, wherein the second
circuit includes at least one coefficient circuit
connected to one of the at least one delayed signal
inputs and to the adjustment input.

Sub A2

4. The circuit of claim 3, wherein the output of
the at least one coefficient circuits is to a delay and
the output of delay sent to the at least one coefficient
circuits.

5. The circuit of claim 3, wherein the
coefficient circuit includes an input summer and a
coefficient multiplier.

6. The circuit of claim 3, further comprising a summer circuit to add the outputs of the at least one coefficient circuit.

Sub B2 7. The circuit of claim 1, wherein the first input and output are phase representations and wherein the adjustment input causes an integer multiple of 2π shift in the output signal.

8. The circuit of claim 1, wherein the first input is differential phase input.

9. The circuit of claim 1, further comprising adjustment control logic adapted to provide the adjustment input.

Sub A3 10. The circuit of claim 9, wherein the adjustment control logic is adapted to produce a minus 2π adjustment signal if a tested signal is greater than a positive reference value and produce a positive 2π adjustment signal if the tested signal is less than a negative reference value.

11. The circuit of claim 1, wherein the second circuit portion is such that, when there is no adjustment input, the circuit acts as a filter as to the first input.

12. A circuit comprising:
a digital filter including input lines giving signal values at different time indexes, coefficient multiplier circuitry adapted to multiply the signal values by filter coefficients, and a summer connected to the coefficient multiplier circuitry to produce an output value; and

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10 summing circuitry connected to the input lines of the signal values at different time indexes and to an adjustment input, wherein the output of the summing circuitry being sent to the coefficient multiplying circuitry.

Sub A4 13. A method comprising: *Fig 4*
providing a circuit;

5 inputting an input signal into the circuit such that the circuit filters the input signal to provide a filtered component to the output of the circuit; and

5 inputting an adjustment signal into the circuit so that the adjustment signal provides an unfiltered offset to the output.

14. The method of claim 13, wherein the adjustment signal keeps the output within a preset range.

15. The method of claim 13, wherein the filtering of the input signal is a low-pass filtering.

16. The method of claim 13, wherein the input is a phase signal.

17. The method of claim 13, wherein the input is a hue signal.

Fig 5 18. A method comprising:
constraining a phase signal within a preset range,
the constraining step including adding a correction signal to the phase signal; and
5 filtering the phase signal without filtering the correction signal portion of the phase signal.

Fig A

19. The method of claim 18, wherein the filtering of the modified phase signal is a low-pass filtering.

Sub B6 20. The method of claim 18, wherein the correction signal is an integer multiple of 2π .

21. The method of claim 18, wherein the preset range is zero to 2π .

22. The method of claim 18, wherein the preset range is zero to 2π plus a guard band.

23. The method of claim 22, wherein the guard band is a reference value above or below the range zero to 2π .

24. The method of claim 23, wherein the guard bands are $-\pi$ to zero and 2π to 3π .

25. The method of claim 18, wherein the constraining step is such that the phase signal is processed so as to use a differential input.

26. The method of claim 25, wherein the differential input is offset by an integer multiple of 2π so as to reduce the absolute value of the differential input.

27. The method of claim 18, wherein the phase signal is a hue signal.

Sub A5 28. An apparatus comprising:
circuitry to constrain a phase signal within a preset range using a correction signal; and

a filter adapted to filter the phase signal without
5 filtering the correction signal contribution.

29. A method of processing data for video comprising:

providing picture data including hue information encoded as a phase having a first range;

5 producing a filtered hue information signal, the filtered hue information signal including unfiltered offsets of plus or minus 2π .

Add A6>

Add C2>